

What is claimed is:

1. A passive device for reducing noise in a hydraulic system including at least one fluid conduit for carrying pressurized fluid, the device comprising:

5

a tubular element having an open end and a closed end, the open end of the tubular element adapted to be attached to the fluid conduit so that the tube fills with the pressurized fluid in communication with the fluid in the system; and

10

the area and length of the tube adapted so that the fluid within the tube has a resonant condition at a frequency that is the same as at least one frequency of the noise that is to be reduced in the hydraulic system.

15 2. A hydraulic system of pressurized fluid for reducing noise, the system comprising:

a fluid conduit for carrying the pressurized fluid; and

20

tubular element having an open end and a closed end, the open end of the tubular element attached to the fluid conduit so that the tube fills with the pressurized fluid in communication with the fluid in the system;

25

wherein the area and length of the tube are predetermined so that the fluid within the tube has a resonant condition at a frequency that is the same as at least one frequency of the noise that is to be reduced in the hydraulic system.

3. A helicopter having a main rotor system including an engine, a transmission, a main rotor, an airframe, and a hydraulic system of pressurized fluid for reducing the transfer of vibration from the main rotor system to the airframe, and a passive device for reducing noise in the hydraulic system, the device comprising:

30

a tube having an open end and a closed end, the open end of the tube adapted to be attached to the hydraulic system, the closed end of the tube being remote from the hydraulic system, the tube being filled with the pressurized fluid in communication with the fluid in the system; and

the area and length of the tube adapted so that the hydraulic fluid within the tube has a resonant condition at a frequency that is the same as at least one frequency of the noise that is to be reduced by the hydraulic system.